

30 2/TT #5

Docket No.: 04754-00043-US

(PATENT)

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE IVED

In re Patent Application of: Stergios V. Anastasiadis et al.

AUG 1 0 2004

Technology Center 2100

Application No.: 10/054699

Confirmation No.: 5410

Filed: January 22, 2002

Art Unit: N/A

For: STREAMING SERVER

Examiner: Not Yet Assigned

## **INFORMATION DISCLOSURE STATEMENT (IDS)**

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 CFR 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement is filed before the mailing date of a first Office Action on the merits as far as is known to the undersigned (37 CFR 1.97(b)(3)).

A copy of each reference on the PTO/SB/08 is attached.

In accordance with 37 CFR 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR 1.56(a) exists. In accordance with 37 CFR 1.97(h), the filing of this Information Disclosure statement shall not be construed to be an admission that any patent,

Application No.: 10/054699 Docket No.: 04754-00043-US

publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

It is submitted that the Information Disclosure Statement is in compliance with 37 CFR 1.98 and the Examiner is respectfully requested to consider the listed references.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 03-2775, under Order No. 04754-00043-US. A duplicate copy of this paper is enclosed.

Dated: August 2, 2004

Respectfully submitted,

Patricia Smink Rogowski Registration No.: 33,791

CONNOLLY BOVE LODGE & HUTZ LLP

1007 North Orange Street

P.O. Box 2207

Wilmington, Delaware 19899

(302) 658-9141

(302) 658-5614 (Fax)

Attorney for Applicant

347458v1

AUG 0 5 2004 &

PTO/SB/08a/b (08-03)
Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/B/PTO

Sheet

Examiner Initials\*

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

1 of 2

	Complete if Known		
Application Number	10/054699-Conf. #	5410	
Filing Date	January 22, 2002		
First Named Inventor	Stergios V. Anastas	sia RECF	EIVED
Art Unit	N/A		
Examiner Name	Not Yet Assigned	AUG 1	0 2004
Attorney Docket Number	04754-00043-US	Tooboology	Center 2100
		<u> 160111101093</u>	Center 2100

	U.S. PATENT DOCUMENTS					
Cite No. <sup>1</sup>	Document Number  Number-Kind Code <sup>2</sup> ( if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear		

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No.¹	Foreign Patent Document  Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>4</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	
					1	Г

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at <a href="https://www.uspto.gov">www.uspto.gov</a> or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English tanguage Translation is attached.

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
	CA	SHENOY and VIN, Failure Recovery Algorithms for Multimedia Servers, University of Texas at Austin, pp. 1-34 (undated)	
	СВ	HASKIN and SCHMUCK, The Tiger Shark File System, IBM Almaden Research Center, IEEE, 1996, pp.226-231	
	C	BOLOSKY, et al., Distributed Schedule Management in the Tiger Video Fileserver, Microsoft Research, SOSP 97 (undated)	
	CD	ANASTASIADIS, et al., Modular and Efficient Resource Management in the Exedra Media Server, University of Toronto, USfNIX Symp. On Internet Tech., San Francisco, CA March 2001	
	CE	SHENOY and VIN, Efficient Striping Techniques for Multimedia File Servers, University of Texas at Austin, NOSSDAV 97, pp. 25-36 (undated)	
	CF	REDDY and WIJAYARATNE, Techniques for improving the throughput of VBR streams, Texas A & M University, NCN 99 (undated)	
	CG	GAFSI and BIERSACK, Data Striping and Reliability Aspects in Distributed Video Servers, Institut EURECOM, In Cluster Computing, Balzer Pub. (1998), pp. 1-27	
	СН	ÖZDEN, et al., Disk Striping in Video Server Environments, AT&T Bell Laboratories, IEEE, 1996, pp. 580-589	
	CI	CARBRERA and LONG, Swift: Using Distributed Disk Striping to Provide High I/O Data Rates, Computing Systems 4(4) (Fall 1991), pp. 405-436	
	CJ	ANASTASIADIS, et al., Server-Based Smoothing of Variable Bit-Rate Streams, ACM Int'l Symp. On Multimedia, October 2001 (Ottawa, ON Canada)	
	СК	ANASTASIADIS, et al., Maximizing Throughput in Replicated Disk Striping of Variable Bit-Rate Streams, USfNIX Annual Tech. Conf., Monterey, CA (June 2002)	
	CL	ANASTASIADIS, et al., Disk Striping Scalability in the Exedra Media Server, University of Toronto, SPIE/ACM Multimedia Computing and Networking Conf., San Jose, CA (Jan. 2001)	
	СМ	MCMANUS and ROSS, A Dyamic Programming Methodology for Managing Prerecorded VBR Sources in Packet-Switched Networks, University of Pennsylvania, January 1997, pp. 1-28	
	CN	ZHAO and TRIPATHI, Banwidth-Efficient Continuous Media Streaming Through Optimal	

Examiner	Date	
Signature	Considered	



PTO/SB/08a/b (08-03)
Approved for use through 07/31/2006. OMB 0651-0031
U.S. Palent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

work Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number. Complete if Known Substitute for form 1449A/B/PTO 10/054699-Conf. #5410 Application Number INFORMATION DISCLOSURE Filing Date January 22, 2002 STATEMENT BY APPLICANT Stergios V. Anastasiaus ( First Named Inventor Art Unit (Use as many sheets as necessary) AUG I 0 2004 Not Yet Assigned Examiner Name 04754-00043-US Technology Center 2100 2 Sheet 2 of Attorney Docket Number

	Multiplexing (undated)	
co	SEN, et al., Proxy Prefix Caching for Multimedia Streams, IEEE, 1999, pp. 1310-1319	
СР	SAHU, et al., On the Efficient Retrieval of VBR Video in a Multimedia Server, IEEE, 1997, pp. 46-53	
CQ	BIERSACK and HAMDI, Cost-optimal Data Retrieval for Video Servers with Variable Bit Rate Video Streams, NOSSDAV 98 (Cambridge, UK) (undated)	
CR	SALEHI, et al., Supporting Stored Video: Reducing Rate Variability and End-to-End Resource Requirements through Optimal Smoothing, University of Massachusetts, SIGMETRICS 96, 1996, pp. 222-231	
CS	SHENOY, et al., Symphony: An Integrated Multimedia File System, University of Texas, pp. 1-17, Tech. Report TR 97-09 (March 1997)	
СТ	SEN, et al., Online Smoothing of Variable-Bit-Rate Streaming Video, IEEE Transactions on Multimedia, v. 2, no. 1 (March 2000)	
CU	MAKAROFF, et al., An Evaluation of VBR Disk Admission Algorithms for Continuous Media File Servers, ACM Multimedia (1997) pp. 145-54	
CV	SANTOS and MUNTZ, Performance Analysis of the RIO Multimedia Storage System with Heterogeneous Disk Configurations, ACM MULTIMEDIA, 1998, pp. 1-6 and 227-238 (1998)	
CW	GRINGERI, et al., Traffic Shaping, Bandwidth Allocation, and Quality Assessment for MPEG Video Distribution over Broadband Networks, IEEE Network, (December 1998)	
CX	LAKSHMAN, et al., VBR Video: Tradeoffs and Potentials, Proceedings of the IEEE, Vol. 86, No. 5, May 1998, pp. 952-973	
CY	MARTIN, et al., The Fellini Multimedia Storage System, Information Sciences Research Center, Journal of Digital Libraries, pp. 1-22 (1997)	
CZ	FLYNN and TETZLAFF, Disk Striping and Block Replication Algorithms for Video File Servers, Proceedings of MULTIMEDIA, IEEE, 1996, pp. 590-597	-
CA1	TEWARI, et al., High Availability in Clustered Multimedia Servers, Int'l Conf. on Data Engineering (Feb. 1996) pp. 336-42	
CB1	Ozden, et al., Fault-tolerant Architectures for Continuous Media Servers, ACM SIGMOD (June 1996)	
CC1	TOBAGI, et al., Streaming RAID-A Disk Array Management System For Video Files, ACM Multimedia, 1993, pp. 393-400	
CD1	Mourad, Doubly-Striped Disk Mirroring: Reliable Storage for Video Servers, Multimedia Tools and Applications 2, 1996, pp. 273-297	
CE1	BERSON, et al., Fault Tolerant Design of Multimedia Servers, ACM, 1995, pp. 364-375	
CF1	GRAY and SHENOY, Rules of Thumb in Data Engineering, IEEE International Conference on Data Engineering, 2000	
CG1	BOLOSKY, et al., The Tiger Video Fileserver, NOSSDAV, (April 1996)	
CH1	PATTERSON, et al., A Case for Redundant Arrays of Inexpensive Disks (RAID), University of California (undated)	
CI1	MCVOY and KLEIMAN, Extent-like Performance from a UNIX File System, USENIX, Dallas, TX (Winter 1991), pp. 1-12	

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Examiner	Date	
Signature	Considered	
	 	·

<sup>&</sup>lt;sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>Applicant is to place a check mark here if English language Translation is attached.



PTO/SB/92 (08-03)

Approved for use through 07/31/2006. OMB 0651-0031 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Application No. (if known): 10/054699

Attorney Docket No.: 04754-00043-US

## Certificate of Mailing under 37 CFR 1.8 RECEIVED

AUG 1 0 2004

Technology Center 2100

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to:

> Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Valerie J. Murphy

Typed or printed name of person signing Certificate

Note:

Each paper must have its own certificate of mailing, or this certificate must identify

each submitted paper.

Information Disclosure Statement

IDS (Citation) by Applicant (w/ references).